

Appl. No. 09/976,206

REMARKS/ARGUMENTS

In the Office Action, claims 50 and 59 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for defining both a method and an apparatus.

Although Applicant believes that claims 58 and 59 properly defined multi-service segmentation and reassembly (MS-SAR) devices in terms of function, these claims have been amended so as to advance the examination of the present application. As amended, each of these claims now recites a multi-service segmentation and reassembly device comprising a serial bus interface and means for performing certain functions in an egress mode or an ingress mode.

Reconsideration and withdrawal of the rejection under 35 U.S.C. 112, second paragraph, are respectfully requested.

The Office Action also includes a rejection of claims 45 to 49, 52 to 55, 58, and 59 under 35 U.S.C. 102(b) as being anticipated by United States Patent 5,526,344 (hereinafter Diaz).

As discussed in further detail below, however, the rejected claims include features that have not been disclosed in Diaz.

Considering first the independent claim 45, this claim recites an operation (a) of detecting on the egress device of the second line card that the amount of available payload memory has reached a low level, and an operation (b), in response to the detecting of (a), of sending a first indication from the egress device of the second line card to the ingress device of the second line card. Regarding these features, page 3 of the Office Action refers to Figure 8a, column 20, lines 65 to 67, and column 21, lines 1 to 15 and 36 to 46 of Diaz.

At lines 65 to 67 of column 20, Diaz refers to losses occurring if a source sends a frame across the slotted bus 246 (Figure 7) towards output buffer 250. Column 21, lines 1 to 15 refer to a mechanism for controlling the data flow between sources and destinations. A backpressure mechanism employing a backoff protocol whereby a congested egress output buffer 250 could communicate to its congesting ingress sources 240, 242, and 244 is mentioned at lines 12 to 15.

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The backoff procedure is described in general at lines 36 to 46 of column 21.

It is noted from the more detailed description of the backoff procedure beginning at line 47 of column 21, however, that the generation of a backoff message in the backoff procedure of Diaz is initiated upon reception of a user datagram. According to lines 60 to 67 of column 21, for example, the generation of an explicit backoff message is initiated by egress block 208 of a packet bus overlay destination 202 upon reception of a user datagram 212. The egress block 208, upon reception of the user datagram 212 of a backoff enabled class of service, issues a generate backoff signal 213 to its ingress block 210. Thus, a generate backoff signal or message is issued by an egress block in Diaz in response to receiving a user datagram.

Independent claim 45, however, clearly recites that a first indication is sent from the egress device of the second line card to the ingress device of the second line card in response to detecting that the amount of available payload memory has reached a low level. This feature has not been disclosed in Diaz, which as noted above discloses a generate backoff signal that is sent from an egress block to an ingress block upon reception of a user datagram.

The above feature thus distinguishes claim 45 over Diaz. Although it is believed that claim 45 as previously presented was not anticipated by Diaz, this claim has been amended to recite the further distinguishing features that the egress device of the second line card comprises a first integrated circuit, the ingress device of the second line card comprises a second integrated circuit, the egress device of the first line card comprises a third integrated circuit, and the ingress device of the first line card comprises a fourth integrated circuit, and that the first, second, third, and fourth integrated circuits are substantially structurally identical integrated circuits. These features were formerly recited in claim 50, which has been cancelled.

Claim 50 was rejected in the Office Action under 35 U.S.C. 103(a) as being unpatentable over Diaz. This rejection is discussed in detail on page 6 of the Office Action.

It is acknowledged in the Office Action that Diaz does not disclose that the egress packet bus overlays (PBOs) and the ingress PBOs of Figure 8a are integrated circuits. It is then asserted in the Office Action that it would have been obvious to a person of ordinary skill in the art to arrange the ingress and egress PBOs as integrated circuits.

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With respect, claim 50, and now claim 45, do not recite only that the egress devices and the ingress devices comprise integrated circuits. These claims also recite that all of the integrated circuits are substantially structurally identical integrated circuits. Thus, according to claim 45 as amended, substantially the same integrated circuit is used to implement both egress devices and ingress devices. Applicant respectfully submits that this would not be obvious to a person of ordinary skill in the art.

Independent claim 45 is therefore patentable over Diaz.

Claims 46 to 49, 51, and 52 depend from claim 45 and are also believed to be patentable over Diaz for at least the same reasons as claim 45.

Independent claim 53 recites a system having a switch fabric, a first line card comprising an ingress device and an egress device, and a second line card comprising an ingress device and an egress device. Claim 53 has been amended to incorporate the features of claim 56, and thus now recites that the egress devices and the ingress devices comprise substantially structurally identical integrated circuits. As discussed in detail above, this feature patentably distinguishes over Diaz.

Claims 54, 55, and 57 depend from claim 53, and are patentable over Diaz for at least the same reasons as claim 53.

The features from claim 56 have been incorporated into claim 53, and therefore claim 56 has been cancelled.

Regarding claims 58 and 59, these claims recite respective MS-SAR devices comprising means operable in either an ingress mode or an egress mode. The devices perform different operations in these modes.

The means in claim 58, for example, are operable in the egress mode for detecting a backpressuring situation and in response thereto outputting a backpressuring signal via a serial bus interface, or in the ingress mode for receiving a backpressuring signal via the serial bus interface and in response thereto outputting a status switch cell. Diaz does not disclose such a

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device comprising means operable either in an egress mode or in an ingress mode as recited in claim 58. Diaz does not disclose or even suggest that a single device could be used to implement the egress PBOs or the ingress PBOs as shown in Figure 8a.

Claim 59 similarly distinguishes over Diaz, in that it recites an MS-SAR device comprising means operable either in an egress mode for receiving a status switch cell and in response thereto outputting a backpressuring signal via a serial bus interface, or in an ingress mode for receiving a backpressuring signal via the serial bus interface and in response thereto slowing a flow of network information passing out on the MS-SAR device.

Applicant therefore respectfully requests that the anticipation rejection under 35 U.S.C. 102(b) and the obviousness rejection under 35 U.S.C. 103(a) be reconsidered and withdrawn.

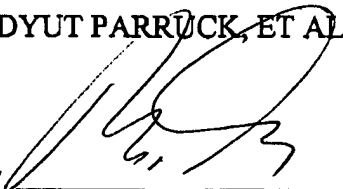
The Examiner is thanked for providing the indication on page 7 of the Office Action that claims 51 and 57 include allowable subject matter. As discussed in detail above, Applicant believes that the remaining claims 45 to 49, 52 to 55, 58, and 59 are also allowable.

In view of the foregoing, Applicant respectfully submits that the application is now in condition for allowance, and early action to this effect is earnestly solicited.

Respectfully submitted,

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